

Environmental Protection Division PO Box 1663, MS J978 Los Alamos, New Mexico 87545 505-667-2211/Fax 505-665-8858

Date: January 22, 2008

Refer To: ENV-DO-08-003

Ms. Debra McElroy
Section Chief – Enforcement/Compliance
New Mexico Environment Department
Air Quality Bureau
1301 Siler Road
Building B
Santa Fe, New Mexico 87507

SEMI-ANNUAL MONITORING REPORT FOR JULY – DECEMBER, 2007 AIR QUALITY TITLE V OPERATING PERMIT P100-M2 IDEA ID NO. 856 – LOS ALAMOS NATIONAL LABORATORY (LANL)

Dear Ms. McElroy:

Enclosed is Los Alamos National Laboratory's Title V Operating Permit Semi-annual Monitoring Report for the period **July 1 – December 31, 2007** (Enclosure-1). This submission is required by permit condition 4.2 of NMED Operating Permit P100-M2 and is transmitted within the allowed 45 days after the end of the reporting period as specified in permit condition 4.3. Included with this report are attachments A through I. Each attachment is labeled with its contents and provides monitoring data to support compliance with conditions listed in the monitoring sections of the permit. No deviations were identified during this reporting period.

If you have any questions or comments regarding this submittal or would like to discuss the submittal in greater detail, please contact Steve Story at 665-2169 or David Paulson at 665-8884.

Sincerely,

Victoria A. George Division Leader

Environmental Protection Division

DLP:tav

Ms. McElroy

Enc: a/s

Cy: w/o opacity reports

M. Mallory, ADPADOPS, A102

R. Watkins, ADESH&Q, K491

S. Fong, DOE-LA-AO, A316

P. Wardwell, LC-ESH, A187

D. Wilburn, ENV-EAQ, J978

S. Story, ENV-EAQ, J978

D. Paulson, ENV-EAQ, J978

J. Stanton, SSS-AE-V02, A199

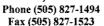
Cy: with opacity reports

ENV-DO FILE IRM-RMSSO, A150 ENV-EAQ Title V Monitoring Report File



New Mexico Environment Department Air Quality Bureau Compliance and Enforcement Section 2048 Galisteo







Version 11.22.06

Reviewed By:

REPORTING SUBMITTAL FORM NMED USE ONLY Staff PLEASE NOTE: ® - Indicates required field Admin SECTION I - GENERAL COMPANY AND FACILITY INFORMATION ® Facility Name: ® Company Name: Los Alamos National Laboratory Los Alamos National Security ® Company Address: ® Facility Address: P.O. Box 1663 Same as Company MS J978 ® City: ® State: ® Zip: ® City: ® State: ® Zip: Los Alamos NM 87545 ® Company Environmental Contact: ® Title: ® Facility Contact: ® Title: Dianne Wilburn **EAQ Group Leader** Steve Story Air Compliance Team Leader ® Phone Number: ® Fax Number: ® Phone Number: ® Fax Number: 505 667 6952 505 665 8858 505 665 2169 505 665 8858 ® Email Address: ® Email Address: story@lanl.gov dianne@lanl.gov Responsible Official: (Title V only): Titla Phone Number: Fax Number: Associate Director ESH&Q 505 667 4218 505 665 3811 Richard S. Watkins Title V Permit Number: NSR Permit Number: NSR Permit Issue Date: Title V Permit Issue Date: ® Al Number: July 16, 2007 P100M2 2195 Various Reporting Period: **Proposed Test Date: Actual Test Date:** ® Date of Submittal: OR January 23, 2008 July through December 2007 SECTION II - TYPE OF SUBMITTAL (check one that applies) Title V Annual Permit Condition(s): Description: **Compliance Certification** Title V Semi-annual Permit Condition(s): Description: X В. **Monitoring Report** LANL Semi-annual Monitoring Report for July through December 2007. All Monitoring Regulation: Section(s): Description: **NSPS** Requirement C. (40CFR60) Test Protocol Test Report Other -Regulation: Section(s): Description: **MACT Requirement** D. (40CFR63) Test Report Other 🗌 Test Protocol Regulation: Section(s): Description: **NMAC Requirement** E. (20.2.xx) or NESHAP Requirement (40CFR61) Test Report Other Test Protocol Permit No.: Condition(s): Description: Permit Requirement F. Test Report ___ Test Protocol Other ___ NOV or SFO No.: Section(s): Description: Requirement of a **Settlement Agreement** G. 🗌 or Compliance Order Test Protocol Test Report Other **SECTION III - CERTIFICATION** certify that the information in this submittal is true, accurate and complete. After reasonable inquiry, I Victoria A. George (name of reporting official) ® Signature of Reporting Official: ® Date ® Responsible Official for Title V? Environmen Yes ⊠ No

Date Reviewed:

Enclosure - 1

Los Alamos National Laboratory's
Title V Operating Permit
Monitoring Report for the period
July 1 – December 31, 2007

LA-UR-08-0360

Approved for public release; distribution is unlimited.

Title:

Semi-Annual Monitoring Report
July 1 - December 31, 2007
Air Quality Title V Operating Permit P100M2
Los Alamos National Laboratory

Author(s):

David Paulson, ENV-EAQ

Intended for:

Ms. Debra McElroy Section Chief, Enforcement/Compliance New Mexico Environment Department - Air Quality Bureau 1301 Siler Road, Building B Santa Fe, New Mexico 87507



Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is operated by the Los Alamos National Security, LLC for the National Nuclear Security Administration of the U.S. Department of Energy under contract DE-AC52-06NA25396. By acceptance of this article, the publisher recognizes that the U.S. Government retains a nonexclusive, royalty-free license to publish or reproduce the published form of this contribution, or to allow others to do so, for U.S. Government purposes. Los Alamos National Laboratory requests that the publisher identify this article as work performed under the auspices of the U.S. Department of Energy. Los Alamos National Laboratory strongly supports academic freedom and a researcher's right to publish; as an institution, however, the Laboratory does not endorse the viewpoint of a publication or guarantee its technical correctness.

Identifying Information	
Source Name: Los Alamos National Laboratory	County: Los Alamos .
Source Address:	
City: Los Alamos	State: <u>NM</u> Zip Code: <u>87545</u>
Responsible Official: Victoria A. George Ph No. (50) Technical Contact: Steven L. Story Ph No. (50)	95) 667-2211 Fax No. (505) 665-8858 95) 665-2169 Fax No. (505) 665-8858
Principal Company Product or Business: National Security and Nuclear Wear	oons Research Primary SIC Code: 9711
Permit No. P100 {IDEA/Tempo ID No. 856} P100M1 (June 15, 2006), P100M2 (July 16, 2007)	Permit Issued Date: April 30, 2004
Certification of Truth, Accuracy, and Completeness	
I, <u>Victoria A. George</u> certify that, based on information and belief statements and information contained in the attached semi-annual monitoring Signature Title: Division Leader, Environmental Protection Division.	

Sources (by permit section)

- 1. Asphalt Production
- 2. Beryllium Activities
- 3. Boilers and Heaters
- 4. Carpenter Shops, TA-3-38 & TA-15-563
- 5. Chemical Usage
- 6. Degreasers
- 7. Internal Combustion Sources
- 8. Data Disintegrator, TA-52-11
- 9. Power Plant at Technical Area 3 (TA-3-22)

Deviations

Attachments

- A: Asphalt Plant Opacity Reports
- B: Beryllium HEPA Filter Tests Results
- C: Boilers and Heaters Natural Gas Usage
- D: Carpenter Shop Hours of Operation
- E: Degreaser Solvent Usage
- F: Internal Combustion Generator Hours of Operation
- G: Data Disintegrator Box Throughput
- H: Power Plant Natural Gas and Fuel Oil Usage
- I: Power Plant Opacity Reports

1. Asphalt Production

Permit Section	Monitoring Required	Monitoring Performed
2.1.4.1	Perform monthly six (6) minute opacity readings for each emission point having opacity greater than zero as determined by EPA Method 22.	Monthly opacity reports are provided as Attachment A. Monthly six minute opacity readings are taken using the required EPA Methods.
2.1.4.2	Monitor the differential pressure (inches of water) across the baghouse by the use of a differential pressure gauge, in accordance with condition IV.C.2 of NSR permit number GCP-3-2195G.	A differential pressure gauge is in place to continuously monitor the differential pressure across the baghouse as required by NSR permit GCP-3-2195G condition IV.C.2. The differential pressure is recorded twice each day during operations, once at the beginning of the production run and once at the end. This is consistent with NSR permit GCP-3-2195G condition IV.D.2(e). Records are available on-site for NMED inspection.
2.1.4.3	40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.	LANL has certified opacity readers on-site who perform opacity readings using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

2. Beryllium Activities (Permit Section 2.2.4)

Source	Monitoring Required	Monitoring Performed
TA-3-29 Chemistry and Metallurgy Research Facility	A log shall be maintained during operations which indicate the number of Be samples processed.	The registration for this source has been cancelled. Beryllium work is no longer performed at this location. A letter was sent to NMED on June 5, 2007 making this request. All previous records/logs containing the number of Be samples processed will be kept for at least five (5) years as required by permit condition 3.2 and will be available on-site for NMED inspection.
TA-3-66 Sigma Facility	A log shall be maintained during operations which show the number of metallographic specimens used in the polishing operation and the weight of Be samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations.	A log is maintained showing the number of metallographic specimens used in the polishing operation. Logs are maintained showing the weight of Be samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations. Logs are available on-site for NMED inspection.
TA-3-141 Beryllium Technology Facility (BTF)	Facility exhaust stack will be equipped with a continuous emission monitor used to measure beryllium emissions.	The BTF is equipped with a continuous emissions monitor to measure beryllium emissions. The monitoring system is operated in accordance with LANL Quality Assurance Project Plans and emission results are provided to NMED quarterly. Submissions for this period were provided to NMED in reports dated August 9, 2007 [ENV-EAQ:07-185] and October 30, 2007 [ENV-EAQ:07-258]

Source	Monitoring Required	Monitoring Performed
TA-3-141 BTF (Continued)	Cartridge and HEPA filters will be equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while the exhaust fans are in operation.	Cartridge and HEPA filters are equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while the exhaust fans are in operation.
TA-16-207	Project files shall be maintained of components prepared for testing.	Project files are maintained of components prepared for testing. Files are available on-site for NMED inspection.
TA-35-87	A log shall be maintained during operations which show the number of beryllium filters cut.	A log is maintained showing the number of beryllium filters cut. The log is available on-site for NMED inspection.
TA-35-213 Target Fabrication Facility	Records of the stack emission test results (see Condition 2 of NSR Permit No. 632) and other data needed to determine total emissions shall be retained at the source and made available for inspection by the Department.	Records of stack emission test results are maintained on-site and are available for NMED inspection. Stack emission test results are used to determine total emissions from this facility.
TA-55-PF-4 Plutonium Facility	The HEPA filtration systems shall be equipped with a differential pressure gauge that measures the differential pressure (inches of water) across the HEPA filters while the exhaust fans are in operation.	The HEPA filtration systems are equipped with differential pressure gauges that measure the differential pressure across the HEPA filters while the exhaust fans are in operation.
	Control efficiency shall be verified by daily HEPA filter pressure drop tests and annual HEPA filter challenge tests of accessible filters.	Control efficiency is verified by daily HEPA filter pressure drop readings. Readings are recorded in the TA-55 Operations Center.
		Annual HEPA filter challenge tests of accessible filters are performed. Test results are summarized in Attachment B.

3. Boilers and Heaters

Permit Section	Monitoring Required	Monitoring Performed
2.3.4.1	Emission units TA-21-357-1, TA-21-357-2, and TA-21-357-3: A volumetric flow meter shall be utilized to measure the total amount of natural gas being used on a monthly basis.	The TA-21 Steam Plant did not operate during this reporting period. The plant was officially and permanently shut-down as of September 28, 2007. This information was communicated to NMED in a letter dated October 16, 2007.
2.3.4.2	Emission units TA-55-6-BHW-1 and TA-55-6-BHW-2: A volumetric flow meter shall be utilized to measure the total amount of natural gas being used on a monthly basis.	Volumetric flow meters are utilized to measure the total amount of natural gas being used by units TA-55-6-BHW-1 and TA-55-6-BHW-2 on a monthly basis. Natural gas usage is summarized in
		Attachment C.
2.3.4.3	40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.	LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

4. Carpenter Shops, TA-3-38 & TA-15-563

Permit Section	Monitoring Required	Monitoring Performed
2.4.4.1	The permittee shall maintain logs of the hours the carpenter shops are in operation.	A log is maintained of the hours of operation at the TA-3-38 shop. During this reporting period, hour meters for the cyclone separators were utilized to monitor hours of shop operation. Readings are collected and recorded monthly. The TA-15-563 carpenter shop is equipped with an hour meter on the cyclone separator. The hour meter is read and recorded monthly. Hours of operation are provided in Attachment D.

5. Chemical Usage

Permit Section	Monitoring Required	Monitoring Performed
2.5.4.1	Maintain records of chemical purchasing through facility-wide chemical tracking system, and use the data to calculate the emissions on a semi-annual basis in accordance with Condition 4.1.	Records are maintained in LANL's facility wide chemical tracking system (ChemLog). The data is used to calculate emissions which are submitted in the Semi-Annual Emission Report.

6. Degreasers

Permit Section	Monitoring Required	Monitoring Performed
2.6.4.1	Record the amount of solvent added to the degreaser, and calculate the emissions on a semi-annual basis in accordance with Condition 4.1.	Records are maintained of the amount of solvent added to the degreaser. This data is used to calculate emissions on a semi-annual basis. LANL's "Historical Solvent Usage Data" report for July 1 through December 31, 2007 is provided in
2.6.4.2	Complete checklist for work practice standards.	Attachment E. LANL completes work practice checklists for the degreaser operation. The checklists are available on-site for NMED inspection.

7. Internal Combustion Sources

Permit Section	Monitoring Required	Monitoring Performed
2.7.4 [Stationary Standby Generators]	Track and record hours of operation for stationary standby generators on a semi-annual basis.	LANL tracks and records generator hours of operation on a semi-annual basis. Stationary generator hours of operation for this reporting period are provided in Attachment F.
2.7.4 [TA-33-G-1]	Track hourly and 12-month rolling total kWh. Record hours of operation and the time operation begins and ends each day.	On May 18, 2006, LANL started the TA-33 diesel generator. Other than the start up test, the generator has not run. A form has been created and will be used for tracking generator start and stop times as well as hours of operation. These hourly readings will be used in tracking the 12-month rolling total of kWh.
2.7.4.1	40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.	LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

8. Data Disintegrator, TA-52-11

Permit	Monitoring Required	Monitoring Performed
2.8.4.1	The permittee shall maintain a log of the number of boxes of media that are destroyed and calculate the emissions on a semi-annual basis in accordance with Condition 4.1.	LANL maintains a log of the number of boxes of media that are shredded and calculates the emissions on a semi-annual basis. The actual number of boxes shredded during this reporting
2.8.4.2	The permittee shall perform regular maintenance and repair on the cyclone and cloth tube filter(s) per manufacturer's recommendations.	period is included in Attachment G. The Data Disintegrator and associated pollution control devices are maintained under a preventative maintenance contract. LANL maintains documentation of all maintenance and repairs performed on the cyclone and cloth tube filters.

9. Power Plant at Technical Area 3 (TA-3-22)

Permit Section	Monitoring Required	Monitoring Performed
2.9.4.1	Total fuel oil consumption shall be monitored so that combined fuel oil usage of Units TA-3-22-1, TA-3-22-2 and TA-3-22-3 can be calculated on a rolling 365-day total.	Total fuel oil consumption is monitored on a daily basis. These daily readings are used to calculate a 365-day rolling total. Attachment H contains a summary of monthly fuel oil consumption. Records of daily fuel oil use are available on-site for NMED inspection.
2.9.4.2	Natural gas consumption shall be monitored so that combined natural gas usage of Units TA-3-22-1, TA-3-22-2 and TA-3-22-3 can be calculated on a rolling 365-day total.	A volumetric flow meter is used to measure the total amount of natural gas used on a daily basis. These daily readings are used to calculate a 365-day rolling total. Attachment H contains a summary of monthly natural gas usage. Daily totals are available on-site for NMED inspection.
2.9.4.3	Natural gas consumption shall be monitored so that natural gas usage for Unit TA-3-22 CT-1 can be calculated on a rolling 365-day total.	The Combustion Turbine started operation on September 23, 2007. A monthly gas consumption report, containing daily turbine gas use, is generated by the plant operator. This data is used to calculate a rolling 365-day total.
2.9.4.4	A certification of total sulfur content of the No. 2 fuel oil used by Units TA-3-22-1, TA-3-22-2 and TA-3-22-3 shall be obtained from the supplier whenever No. 2 fuel oil is delivered to the facility.	No fuel oil was purchased or delivered during this reporting period.

Permit	Monitoring Required	Monitoring Performed
Section 2.9.4.5	If the certification as specified by	No fuel oil was purchased or
	Condition 2.9.4.4 is not available at delivery, the permittee shall analyze	delivered during this reporting period.
	the No. 2 fuel oil to determine the total	Period
	sulfur content. The analysis shall be	
	conducted using Department approved methods and standards for determining	
	total sulfur content of No. 2 fuel oil.	
2.9.4.6	The operating load of Unit TA-3-22	A tracking log was created that
	CT-1 specified by Condition 2.9.3.7 shall be monitored and recorded hourly	contains the hours of start-up, normal operation, shut-down,
	during normal operations of that unit.	and the hourly operating load
	Periods of startup and shutdown shall	during normal operation.
	not be included in the hourly monitoring but shall be recorded	
	separately.	
2.9.4.7	Compliance with NOx pound per hour	An emission calculation
	emission limits for Unit TA-3-22 CT-1	spreadsheet was created, using
	shall be determined by multiplying the daily total natural gas firing rate for the	the formula in this permit condition, to calculate the NOx
	unit (expressed in thousands of SCF),	pound per hour and ton per year
	as recorded pursuant to Condition	emission rates. This data is
	2.9.5.3, by the manufacturer's	compared with the permit
	guaranteed emission rate of 0.1029 pounds NOx per thousand SCF of gas	emission limits.
	burned (applicable for worst-case	
	conditions of negative 18 degrees	
	Fahrenheit) and divided by the number	
	of hours of operation of the unit during that day as recorded pursuant to	
	Condition 2.9.3.8. Compliance with	
	NOx annual emission limits for Unit	
	TA-3-22 CT-1 shall be determined by	
	multiplying the 365 day total natural gas firing rate for the unit (expressed in	
	thousands of SCF), as recorded	
	pursuant to Condition 2.9.5.3, by the	
	manufacturer's guaranteed emission	
	rate of 0.1029 pounds NOx per thousand SCF of gas burned	
	(applicable for annual average	
	conditions of 47.9 degrees F).	

Permit Section	Monitoring Required	Monitoring Performed
2.9.4.8	Compliance with CO pound per hour emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the daily total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.731 pounds CO per thousand SCF of gas burned (applicable for worst-case conditions of negative 18 degrees Fahrenheit), and divided by the number of hours of operation of the unit during that day as recorded pursuant to Condition 2.9.3.8). Compliance with CO annual emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the 365 day total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.0613 pounds CO per thousand SCF of gas burned (applicable for annual average conditions of 47.9 degrees Fahrenheit).	An emission calculation spreadsheet was created, using the formula in this permit condition, to calculate the CO pound per hour and ton per year emission rates. This data is compared with the permit emission limits.
2.9.4.9	At least once each calendar quarter the permittee shall use the method specified in Conditions 2.9.4.7 and 2.9.4.8 to determine compliance of Unit TA-3-22 CT-1 with the hourly and annual emission limits specified in this permit.	Monthly gas use data is entered into the above mentioned spreadsheet which uses the required method to automatically calculate both NOx and CO hourly and annual emissions. The resulting data is used to determine compliance with emission limits.

Permit	Monitoring Required	Monitoring Performed
Section		
2.9.4.10	Visible emissions from stationary combustion equipment shall not equal or exceed an opacity of 20%. Use of pipeline quality natural gas fuel as defined in Conditions 2.9.3.1 and 2.9.3.4 constitutes compliance with	LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine compliance with the opacity limitation.
	20.2.61 NMAC unless opacity exceeds 20%. At such time as No. 2 fuel oil as defined in Condition 2.9.3.1 is used, opacity shall be measured in accordance with the procedures at 40 CFR 60, Appendix A, Method 9.	Delivery of pipeline quality natural gas is specified in the transportation contract with the supplier.
	Opacity measurements shall continue on a quarterly basis per calendar year for each effected unit until such time as pipeline quality natural gas is used.	Opacity measurements performed at the Power Plant are provided in Attachment I.
2.9.4.11	Initial compliance tests are required on Unit TA-3-22 CT-1 for NOx and CO. These tests shall be conducted within sixty (60) days after the unit achieves the maximum normal production. If the maximum normal production rate does not occur within one hundred twenty (120) days of source startup, then the tests must be conducted no later than one hundred eighty (180) days after initial startup of the source. The tests shall be conducted in accordance with EPA Reference Methods 1 through 4, Method 7E for NOx, and Method 10 for CO contained in CFR Title 40, Part 60, Appendix A, and with the requirements of Subpart A, General Provisions, 60.8(f). Alternative test method(s) may be used if the Department approves the change. The permittee shall submit a testing protocol to the Department at least thirty (30) days prior to the test date, and provide notification to the Department at least thirty (30) days prior to the test date.	An initial compliance test was performed on the combustion turbine within 60 days following the unit achieving maximum normal production. The unit achieved its maximum normal production rate on September 27, 2007, and the compliance test was performed on October 5, 2007. The test report was provided to NMED on October 22, 2007. The test consisted of the EPA test methods identified in this permit condition.

Permit Section	Monitoring Required	Monitoring Performed
2.9.4.12	The permittee shall comply with fuel sulfur monitoring requirements at 40 CFR 60.334(h) applicable to Unit TA-3-22 CT-1 by making the required demonstration which shows the fuel combusted in the turbine meets the definition of natural gas at 40 CFR 60.331(u).	The natural gas used by the combustion turbine meets the definition of natural gas in 60.331(u). The sulfur monitoring requirement is met under 40 CFR 60.334(h)(3)(i), which allows the use of a current and valid transportation contract that specifies the maximum total sulfur content is 20 grains per100 scf or less. The transportation contract specifies a sulfur content not to exceed 2 grains of total sulfur per 100 scf. A copy of the transportation contract is available at the facility.

Deviations

Permit Section 4.2 requires that all	instances of	f deviations	from permit	conditions,	including
emergencies, be clearly identified.	Listed belov	w are permit	deviations t	his period:	

1.	No deviations occurred during this reporting period.	
	Last Entry	

Attachment A Asphalt Plant Opacity Reports

Summary Table, Reports Attached

	Source	Date	Time	Average Opacity	EPA Method
July	Entire Plant	07/09/07	8:56 am	0	22 ^(b)
Aug.	Entire Plant	08/21/07	10:04 am	0	22 ^(b)
Sept.	Top of Shaker	09/06/07	8:30 am	0	9 ^(a)
Oct.	Top of Shaker	10/11/07	8:37 am	0	9 ^(a)
Nov.	Top of Shaker	11/07/07	8:48 am	0	9 ^(a)
Dec.	Top of Shaker	12/05/07	9:25 am	0	9 ^(a)

- (a) EPA Method 9 was used. Average opacity for the Asphalt Plant is the sum of the highest consecutive 24 readings divided by 24 (6 minutes of readings). The method is in accordance with 20.2.61 NMAC and condition 2.1.4.1 of the Los Alamos National Laboratory (LANL) Operating Permit P100M2.
- (b) EPA Method 22 was used to determine if any visible emissions greater than zero were present at the plant. If any emissions are observed using Method 22, a Method 9 observation will be performed on those points. Use of Method 22 is in accordance with condition 2.1.4.1 of the Los Alamos National Laboratory (LANL) Operating Permit P100M2.

Los Alamos National Laboratory METHOD 22 FUGITIVE OPACITY EMISSION INSPECTION FORM **Location: LANL Asphalt Plant Observer Affiliation: KSL-ENV** Representative: Donald Stone Date of Inspection: 07/09/07 Sky Conditions: Clear Wind Direction: From NNW Precipitation: None Wind Speed: 3 -7 mph Industry: National Defense Process Unit: All potential fugitive sources Sketch of Process Unit: Indicate: * observer position relative to source * wind direction * potential emission and/or actual emission points * North direction * sun location Conveyor Bag House Elevator Shaker Wind Dir. Observer position O sun Observations: Clock Time Observation period Accumulated emission duration (min:sec) time (min:sec) Begin 0856 11 min **End Observation** 0907 Notes: During the observation period, there were no visible emissions. All probable fugitive sources at the plant were observed. This form is used to determine if any fugitive emission with opacity greater than zero is observed. If an emission is observed during the Method 22 inspection observation period (which must be at least 6 minutes for the Asphalt Plant and 10 minutes for all other LANL sources), a method 9 visible emission test may need to be performed. Signature of observer Inspector: Date:

LUCAHUII, LAN	L Asphalt Plant	Observer Affiliati	on: KSL-ENV
*** **********************************	e: Donald Stone	Date of Inspectio	n: 8-21-07
Sky Condition	s: Clear	Wind Direction: F	From NNE
Precipitation:		Wind Speed: 3-5	mph
Industry: Natio	nal Defense	Process Unit: All	ootential fugitive
	tion relative to sour	ce * wind d emission points * North c	
	Bag House	Elevator	aker
		position O sun	
Observations:	Clock Time	Observation period Aduration (min:sec)	ccumulated emis time (min:se
	1004	10 min	0
Begin			
Begin End Observation	1014	10 HHI	
End Observation	1014	od, there were no visible	



LOS ALAMOS NATIONAL LABORATORY (LANL) VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

Source Name:	Observation D	ate		Start	Time	End Time	
LANL Asphalt Plant		9-6-07		0830		0836	
Source Location:		Sec			444,000	-	
TA-60 (S	Sigma Mesa)	Min	0_	15	30	45	Comments
Type of Source	Type of Control Equipment] 1	0	0	0	0	or a venanta.
Asphalt Plant	Baghouse	**************************************				f	
Describe Emission Point (Top of st.	ack, etc.)	1	0	0	0	10	
Top of Shake	V Stack	3	0	1	0	0	And the second s
Height Above Ground Level	Height Relative to Observer]	-	<u> </u>			
45 Feel	45 Feet	<u> </u>	0	0	0	0	
Distance From Observer	Direction of Source From Observer	ll 5	0		6		
55 Feet				· •	0	0	
Description of Plume (stack exit on	ly)] [6	0	0	0	0	
□Lofting □Trapping □Loopin ■No Plume Present	g □Fanning □Coning	7					
Emission Color Plume Typ		11			-		
emission Continue	ous	8					
Water Droplets Present?		9		97.55.5	100		
■NO DYES If YES, droplet plun	ne is DAttached Detached						
At what point in the plume was ona	city determined?	10					
10+012 inche	s above stack	11					
Describe Background (i.e. blue sky,	7.						
Tarkly Cloudy	ORU	12	3.5.5				
Background Color	Sky Conditions	13					
She gray	Tarly Cloudy	1-2					
Wind Speed / Wind Direct mph (provide from	etion Om/to, i.e. from North to South)	14					
/- C mpin (provide in	onia to, i.e. from North to South	15					
TAR	Relative Humidity	F					
62°F	66°	- 16					
Additional Comments/Information:	- 1 1	17					
all enusion	points clear	18				0.7	10 (20 co 60 (2) (8) (6)
	′						
		19					
Stack SOURCE L.	AYOUT SKETCH	20					
with Plume	Draw Arrow in	Average 6-Mi	nute Oj	pacity	F	tange o	f Opacity Readings
Emi	ssion North Direction		0	_	1.0	$^{\mathrm{vlin.}}\mathcal{O}$	% Max の %
	int (1	OBSERVER	olease	print)		-	
Wind -	ostick //	Name:	· ·	•		Title:	ļ
	ostick ()	1100.	5/0	HP_		Enl	Se June y
		Signature					Date
	•		-1	-			Date 9-6-07
		Observer Org	16	/ //	Andrew Indonesia.		1-6-01
		Obscive Cry	544 FT & \$2 5.1 4.	,FR K			***************************************
		LKSL			ca(moremon, mar ****		
	OBSERVER'S POSITION	Certified by		w			Certification Date
14	0°	4-1	4			P (174)	8-29-07
***************************************	•	1/2 / 7	1		,	<u>}</u> (<u> </u>
SUN LOCA	TION LINE						



LOS ALAMOS NATIONAL LABORATORY (LANL) VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

Source Name:		Observation Date			1		End Time
3	Asphalt Plant	10-11-07		D837		0842	
Source Location:	Ciones Mans)	Min	0	15	30	45	Comments
Type of Source	Sigma Mesa) Type of Control Equipment	4	<u> </u>	1	39	1 47	S CHISSIES
Asphalt Plant	Baghouse		10	12	10	IC.	
Describe Emission Point (Top of s		12	10		10	0	Annual Control of the
Top of Shake Height Above Ground Level	r Stack	3			1	·	
Height Above Ground Level	Height Relative to Observer 425 Feet	40° 00° 00° 00° 00° 00° 00° 00° 00° 00°	armond armond determinent	1	b		
Distance From Observer	Direction of Source From Observer	-		12	<i></i>	ļ <i>a</i> 2.	
55 Feet	NNW	5	0	0	2	12	
Description of Plume (stack exit or	ıly)	6	0	0	0	0	Action A P. Action Co.
□Lofting □Trapping □Loopin		7		a Turning (Copy)			
Emission Color Plume Ty	pe 🗷 No Plume Present ious 🗆 Fugitive 🗀 Intermittent	8					
Emission Water Droplets Present?	*						
MNO □YES If YES, droplet plus	me is □Attached □Detached	9		<u> </u>		-	
At what point in the plume was op		10				ANN CALLED STATE OF THE STATE O	
J1211 above Top Describe Background (i.e. blue sky	ot Stack	11				occupant of the control of the contr	
Blue SKY Background Color		12					
i	Sky Conditions					**************************************	
Wind Speed Wind Dire	Clear	13	o a			and the same of th	
Wind Speed Wind Direction 5-9 mph (provide f	rom/to, i.e. from North to South)	14					
From	n NW	15					
Ambient Temperature	Relative Humidity 53 %	16					
Additional Comments/Information		17					
All emission &	Points Clear	18				Particular de la constantina della constantina d	
		19			***************************************		
		\$1.400.0000 1000 1000 1000 1000 1000 1000			****************		
Stack SOURCE L	AYOUT SKETCH	20					
	Draw Arrow in North Direction oint	Average 6-M	%				of Opacity Readings % Max. 09/6
Wind —		OBSERVER (please print) Name: Title:					
	N	Sygnature	DNE-			er et en	Date Date
		Boserver Or	Symizaci gantzaci	L <u>22 21</u> 311			12:22:02
		<u>K54.</u>	handred by the block by the court by the court	nim i v Probletor vonovi sove			المراقعة الم
	OBSERVER'S POSITION	Certified by					Certification Date
	40°	1574	·				8.29.27
2001002	TION LINE						



LOS ALAMOS NATIONAL LABORATORY (LANL) VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

Source Name:					End Time		
LANL	Asphalt Plant	11/1-7	-07	7	08	48	0854
Source Location:		Sec					
TA-60 (Sigrna Mesa)	Min	10	15	30	45	Comments
Type of Source	Type of Control Equipment	1	10	0	0	10	The state of the s
Asphalt Plant	Baghouse		1	1	1	1-2	
Describe Emission Point (Top of s		2	0	0	0	12	
i .		3		0	1		
TOP OF SHA! Height Above Ground Level	Height Relative to Observer	1	10		\mathcal{O}	10	
45 Feet	45 Feet	4	0	0	2	0	
Distance From Observer	Direction of Source From Observer	5	0	0	0	0	
	NW .	6	10		0		
Description of Plume (stack exit or DLofting OTrapping OLooping			15 (46) (41)	19 Marie 11	F 03		li Hitzalia da calcia da esperantes
ANO Plume Present							
Emission Color Plume Typ	ous Fugitive Intermittent	8		161			
Wenter Droplets Present?	***************************************	0.665 (endes 1912) 260 (endes			a vasati Albade	is Modus Maddall	
MNO DYES If YES, droplet plum	ne is []Attached []Detached	9					
At what point in the plume was opa	city determined?	10					
Describe Background (i.e. blue sky,	Arees, etc.)			被称为	akindidi.		
Blackground Color		1 12					
Background Color	Sky Conditions		1. 1.2 3				
BLUE	Clear						
Wind Speed Wind Direc	ction	14					
	om/to, i.e. from North to South)	ी ने वहीं वसीय विश्वापनिविधान			4.0), d. 45.47 31, 22.90, k		
troi	M SE Relative Humidity	15					
Ambient Temperature	Relative Humidity	16					
Additional Comments/Information:	<u> 30 % </u>						
Additional Comments/Information: All ew15510M-Pe	out la		排算情				
MIL EM 153/1011 - Pe	ents elegt	18					
						anga ragi Manga ragi	
		19					
Stack SOURCE L.	AYOUT SKETCH	20					
with ()	Draw Arrow in	Average 6-Min	nute On	acity	R	ange o	f Opacity Readings
Plume	North Direction	l 1	7 Ø 2				Max. , a
- / / /	int \	ODGEDVED (1/8				10 1/0
Wind S	$\mathcal{F}_{\mathcal{F}}$	OBSERVER (picase p	orini)		Title:	
Wind		172.5	<u> </u>	d			a
	`	Signature	MACE			7	3/neer Date
		Orginature	,	1			
		Jon	≤ 7	ou	<u>e</u>	/	11-7-07
		Observer Orga	ujizatio	וו			
		1856					-
	OHSERVER'S POSITION	Certified by					Certification Date
14	0°	15.51				***************************************	8-29-07
	-0	EJA					4-21-21
SHN LOCA	TIOLUNE						



LOS ALAMOS NATIONAL LABORATORY (LANL) VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

Source Name:		Observation Date Start Time End Time				End Time	
LANL Asphalt Plant		12-5	12-5-07 Sec 107			and the	0931
Source Location:		Sec					****
TA-60 (S	Sigma Mesa)	Min	0	15	30	45	Comments
Type of Source	Type of Control Equipment	1 1	10	13	12	1	
Asphalt Plant	Baghouse				_		
Describe Emission Point (Top of st		1 2	2	9/	0	0	
Height Above Ground Level	KER STACK] 3	1	319		10	
Height Above Ground Level	Height Relative to Observer			162		12	
45 Feet	45 Feet	4	10	10	10	1)	
	Direction of Source From Observer	5	r-\		250	v-2	
55 Feet	NW	***************************************	144	22	and the second		
Description of Plume (stack exit on] 6	0	20	9	17	
□ Lofting □ Trapping □ Loopin 28No Plume Present	g □Fanning □Coning	7					
Emission Color Plume Typ	e EiNo Plume Present	1					
NO EMISSION Continue		8					
Water Droplets Present?		9					
ÆNO □YES If YES, droplet plun	ne is DAttached Detached						
At what point in the plume was opa	city determined?	11 10					
					*******	(Constituting to the State of t	
Describe Background (i.e. blue sky,	trees, etc.)	1 11					
		12					
Blue 5KX Background Color	Sky Conditions						
Blue.	Partly Cloudy	13					
Wind Speed Wind Direct	ction ()	14					
5-7 mph (provide fr	om/to, i.e. from North to South)	1 1 1 1 1			-		
From	55E	15					
Ambient Temperature	SSE Relative Humidity	12		0.021005.41		101 102 10 <u>9</u>	
42°F	53%	16			************		
Additional Comments/Information:		17					
ALL EMISSION	POINTS LLEAR	1					
	, chi decen	18					
		19					
]					
	AYOUT SKETCH	20					
with O Plume	Draw Arrow in	Average 6-Min	rute Op	pacity	R	lange o	f Opacity Readings
Emi:	ssion North Direction	(2)	The second	() (**)	13	Ain.	9/ Max.1991
Sun 🔶 Po	oint (1)	OBSERVER (please	print)		······································	<u> Sant Callerina and Caraban Standard a</u>
Wind —	δ	Name:	•	,		Title:	***************************************
~	1	11 /2 mar		 D <i>ur 6</i> 7		EN	2.2000
		Signature		tion and the second	r	***************************************	Date
		1 (10 1		Salaran Market	4		3
			<u> </u>		ヒチル		14-0-22
		Observer Orga	mzanc	XT "			
		15/					And the second s
	OBSERVER'S POSITION	Certified by				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Certification Date
1.0	10°					-	1 70 -
	•		***************************************		*		8-40/
STINLLOCA	TONE THE						

Attachment B Beryllium HEPA Filter Tests Results

Summary Table, Reports Attached

Unit	Date	Pass/Fail
TA-55 (H-5-1450) (FF-854)	7/10/2007	Pass
TA-55 (H-5-1460) (FF-855)	7/10/2007	Pass
TA-55 (H-5-5870) (FF-858)	7/10/2007	Pass
TA-55 (H-5-5880) (FF-859)	7/10/2007	Pass

ATTACHMENT A 300 Area Glovebox Exhaust FF-854 Data Sheet

Date: 0 7- 1		LAS Calibr		iluter Calibration xpiration Date:	10-02-07 (8.4.4)	Dilution Ratio: <u>2063</u> (8.4.2)				
Step Number	3.4.1)		(8.4.3)		(0.4.4)	FF-854 H-5-1450				
9.1.12.2	Bad	Background concentration (part./cc) 2-835X10 part concentration								
9.1.12.3	Ups	stream concent	ration (part./cc)		2.14	9x10 part concentration				
9.1.12.4	Cha	allenge aerosol	concentration between	n 2.00 x10 ⁶ and						
9.1.12.5	151	stage downstre	am concentration (part	./cc)	2.6	2 GX10 part. concentration				
9.1.12.6	2 nd /	3 rd stage downs	stream concentration (part./cc)		34X10 part concentration				
9.1.12.7	1 st :	stage Penetration	on ≤ 5.0 x10 ⁻⁴ (efficience	y ≥ 99.95%)		7×10^{-4}				
9.1.12.8	2 nd /	3 rd stage Penet	ration ≤ 2.5 x10 ⁻⁷ (effic	iency ≥ 99.999		18x10-9				
9.1.13.2 9.1.13.3	FH	1, FF-859-FH1,	ball valves are closed TP-858-2,TP-855-2, T P-855-3, TP-855-1, TF	P-854-2, TP-		itials Independent Verification				
		Valve	Required Position	Initials	Independent Verification					
		HV-854-J	Closed and Locked	RO	mm					
	ľ	HV-854-G	Closed	No	Mint					
	-	HV-854-H	Closed	Pro	nmi					
		HV-854-D	Closed	M	Think					
	-	HV-854-C	Closed	110	min	lin				
	-	HV-854-B	Closed	FFO	mont	3/0"				
	***************************************	HV-854-A	Closed	PPO	WWE	OFMATION				
		mm.	JON, 1							
Comments:										
		And the state of t			~60,					
Surveillance Personnel	Ba	Signature	07-10-07 Date	OC On-duty Supervisor	De Color Signatu	re Date				

ATTACHMENT C 300 Area Glovebox Exhaust FF-855 Data Sheet

	10 - 0 3.4.1)	LAS Calibrat Expiration Da		uter Calibration cpiration Date:	<u> 0-2 -</u> (8.4	07	lution Ratio: <u>よひら</u> で (8.4.:			
Step Number			ltem		,		FF-855 H-5-1460	l		
9.3.12.2	Bad	kground concen	tration (part./cc)			7.0WX	3 10 part concent	ration		
9.3.12.3	Ups	Upstream concentration (part./cc) 2. 445/10 part.concentration								
9.3.12.4	Cha	allenge aerosol c	oncentration between	2.00 x10 ⁶ and	2.71 x1		(AD)	nitials		
9.3.12.5	1 ^{5†} 5	stage downstrear	m concentration (part./	/cc)		3.1074	•			
9.3.12.6	2 nd /	3 rd stage downstr	ream concentration (p	art./cc)	***************************************	1,059X1	"			
9.3.12.7	151 5	tage Penetration	ı ≤ 5.0 x10 ⁻⁴ (efficiency	/ ≥ 99.95%)	·	[.270XI	_ <	1811011		
9.3.12.8	2 nd /	3 rd stage Penetra	tion ≤ 2.5 x10 ⁻⁷ (efficie	ency ≥ 99.9999	75%)	1.444 X	.7			
9.3.13.2 9.3.13.3	FH1	Ensure all test port ball valves are closed; (FF-858-FH1, FF-859-FH1, TP-858-2, TP-855-2, TP-854-2, TP-859-2, TP-854-3, TP-855-3, TP-855-1, TP-854-1)								
		Valve	Required Position	Initials		pendent ification				
		HV-855-J	Closed and Locked	PO	M	in				
		HV-855-G	Closed	fo	m	tin				
		HV-855-H	Closed	RO	11	Tw				
		HV-855-D	Closed	BO ~		wit				
		HV-855-C	Closed	h	m	7.00				
		HV-855-B	Closed	RO	1100	To a				
		HV-855-A	Closed	HO	K	型(O)	*			
		HV-854-AA	Closed	FOR SCO	WINT	7				
Comments: FOR INVOINT										
Surveillance Personnel	B	NAL (1) Signature		C On-duty - upervisor	De .	ignature	(7/10 V De	ite		

ATTACHMENT B 300 Area SRL Glovebox Exhaust FF-858 Data Sheet

Date: <u>7-7-</u>) - (1.4.1			Expiration Date:	10-2-0 (8.4		Ratio: <u>2.063</u> (8.4.2)
Step Number			ltem				FF-858 H-5-5870
9.2.9.2	В	ackground conce	entration (part./cc)			00	part. concentration
9.2.9.3	U	pstream concent	ration (part./cc)		2.189	PXID part. concentration	
9.2.9.4	CI	hallenge aerosol	concentration between	n 2.00 x10 ⁶ and	2.71 x1		
9.2.9.5	15	stage downstre	am concentration (part	./cc)		5.642	PAIO part. concentration
9.2.9.6	2 ⁿ	d/3 rd stage downs	stream concentration (part./cc)		7.06	-3
9.2.9.7	15	stage Penetration	on ≤ 5.0 x10 ⁻⁴ (efficience	y ≥ 99.95%)		2.57	8×10 ⁻⁵
9.2.9.8	2 ⁿ	d/3 rd stage Penet	ration $\leq 2.5 \times 10^{-7}$ (effic	iency <u>≥</u> 99.999	975%)		6x10-9
9.2.10.3 9.2.10.4	F	11, FF-859-FH1,	ball valves are closed TP-858-2,TP-855-2, T P-855-3, TP-855-1, TI	P-854-2, TP-	RO	Initi	ials Independent Verification
		Valve	Required Position	Initials		endent cation	
		HV-858-8	Closed	M	W	M	The state of the s
		HV-858-7	Closed	140	(h	WI	
		HV-858-5	Closed	40	W	ut	
		HV-858-3	Closed	40	W.	With	
		HV-858-2	Closed	60	M	the	activities and the second seco
		HV-858-1	Closed	HO	M	Mit	
		HV-854-AA	Closed	HO	M	NATH	Dia
Comments:				i i i i i i i i i i i i i i i i i i i	Wing.	11.	
			2.	OHIMA	Also.	<u></u>	
		The second secon		<u>o.</u> (<u>ن</u>	· · · · · · · · · · · · · · · · · · ·	
Surveillance Personnel	b	WH Constitute Signature	7-10-87 Date	OC On-duty Supervisor	Dest	D. S.	= \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \

ATTACHMENT D 300 Area SRL Glovebox Exhaust FF-859 Data Sheet

LAS Calibration Diluter Calibration Dilution Expiration Date: 03-06-08 Date: 17-10-07 Ratio: 2063 Expiration Date: 10-02-07 (8.4.3)(8.4.4) (8.4.2)FF-859 Step Item Number H-5-5880 Background concentration (part./cc) 9.4.9.2 part, concentration 9.4.9.3 Upstream concentration (part./cc) .095 VID Challenge aerosol concentration between 2.00 x10⁶ and 2.71 x10⁶ part./cc 9.4.9.4 fu 1st stage downstream concentration (part./cc) 9.4.9.5 part, concentration 2nd/3rd stage downstream concentration (part./cc) 9.4.9.6 062×10 part_concentration 1st stage Penetration ≤ 5.0 x10⁻⁴ (efficiency ≥ 99.95%) 9.4.9.7 3.070/10 $2^{nd}/3^{rd}$ stage Penetration $\leq 2.5 \times 10^{-7}$ (efficiency $\geq 99.999975\%$) 685VID 9.4.9.8 Ensure all test port ball valves are closed; (FF-858-FH1, 9.4.10.3 Independent Verification Initials FF-859-FH1, TP-858-2, TP-855-2, TP-854-2, TP-859-2, 9.4.10.4 work TP-854-3, TP-855-3, TP-855-1, TP-854-1)

Valve	Required Position	Initials	Independent Verification
HV-859-8	Closed	10	must
HV-859-7	Closed	no	mari
HV-859-5	Closed	80	Erw.
HV-859-3	Closed	10	June
HV-859-2	Closed	PO	min
HV-859-1	Closed	MO	MERCH
HV-854-AA	Closed	50	TARKE

Surveillance Personnel Signature Date

CONTROL 1/10/3

Supervisor Date

Signature Date

Attachment C Boilers and Heaters Natural Gas Usage

2007 Small Boilers Data Entry / Gas Use

		N	letered Boile	rs		-						
		(MS	ler Gas Use CF) ^(c)	TA-50-2 ^(d) (MSCF)	Total Gas Use ^(a)						Non-Metered Gas Use	12-Month Rolling Total for
	Month	BHW-1B (B-602)	BHW-2B (B-603)	BS-1	(MSCF)	(MMSCF)	(MMSCF)	all Small Boilers (MMSCF) ^(e)				
	January	1	2657		81,782	81.78	79.12	502.42				
]	February	676	1261		66,101	66.10	64.16	508.94				
	March	1609	1		54,352	54.35	52.74	505.10				
>	April	1248	797		44,215	44.22	42.17	513.53				
표	May	1379	1836		29,468	29.47	26.25	521.07				
Entry	June	348	379	0.1	13,530	13.53	12.80	518.20				
1	July	333	128		13,687	13.69	13.23	519.25				
Data	August	415	1297		8,794	8.79	7.08	514.87				
	September	345	1160		19,691	19.69	18.19	511.34				
	October	345	1537		36,509	36.51	34.63	506.16				
	November	702	798		54,213	54.21	52.71	502.26				
<u> </u>	December	769	814	0.0	79,717	79.72	78.13	502.06				
	TOTAL	8170	12665	0.1	502,059	502.06	481.22	Permit Limit: 870				

2006 Non Metered Boiler Pool Capacity:	304.3	MMBTU/hr ^(f)	
Estimated Gas-Use per MMBtu rating Jan-June:		0.91	MMscf/MMBtu/hr
Estimated Gas-Use per MMBtu rating July-Dec:		0.67	MMscf/MMBtu/hr
Estimated Gas-Use per MMBtu - Annual		1.58	MMscf/MMBtu/hr

Definitions:

MMSCF= Million Standard Cubic Feet MSCF = Thousand Standard Cubic Feet

Metered/Non-metered: Metered boilers are those units that have unit specific volumetric flow meters for the

boiler(s) only.

Gas Use Non-Metered ^(g) (MMSCF)									
AIRS Stack #	015	016	017	018	019	020	021	024	Insignifican Units ^(h)
Location:	TA-48-1	TA-48-1	TA-48-1	TA-53-365	TA-53-365	TA-59-1	TA-59-1	TA-16-1484	Lab Wide
ID:	BS-1	BS-2	BS-6	BHW-1	BHW-2	BHW-1	BHW-2	Plant 5	Various
Design Rate ⁽ⁱ⁾ (MMBTU/hr)	5.336	5.335	7.140	7.115	7.115	5.335	5.335	12.700	249
Calculated Gas Use-Jan-June	4.862	4.861	6.505	6.482	6.482	4.861	4.861	11.571	226,769
Calculated Gas Use-July-Dec	3.577	3.576	4.786	4.769	4.769	3.576	3.576	8.513	166.826
Calculated Gas Use-Annual	8.439	8.438	11.291	11.251	11.251	8.438	8.438	20.084	393.595

2007 TA-21 Steam Plant Data Entry / Fuel Use

DATA ENTRY
Monthly Fuel Use
TA-21-357

0

July - Dec.

4			<u> </u>	•				
	TA-21-357		Converted		Natural Gas Use	Fuel Oil Use		
Month	Natural Gas (MCF)	Fuel Oil (gallons)	Natural Gas (MMscf)	Month	12-Month Rolling Total (MMscf)	12-Month Rolling Total (Gallons)		
January	3184	0	3.184	January	29.16	402		
February	2895	9	2.895	February	28.58	411		
March	2853	10	2.853	March	27.87	421		
April	2297	6	2.297	April	27.65	427		
May	2172	3	2.172	May	27.82	430		
June	1803	41	1.803	June	27.91	. 471		
July	0	0	0.000	July	26.21	137		
August	0	0	0.000	August	24.62	118		
September	0	0	0.000	September	22.91	118		
October	0	0	0.000	October	20.70	95		
November	0	0	0.000	November	18.20	75		
December	0	0	0.000	December	15.20	69		
Annual Totals:	15204	69	15.204					
Jan June	15204	69	15.204]	Permit Limit = 60 MMScf/	yr natural gas (12 month ro		

0.000

Permit Limit = 60 MMScf/yr natural gas (12 month rolling total) and 10,000 gal/yr fuel oil (12 month rolling total)

In August, 2007, the TA-21 Steam Plant was placed on the D&D list and will no longer be operated. No further entries will be made on this calculation sheet after that date. A letter was sent to NMED in October informing them that the plant has closed.

Attachment D
Carpenter Shop Hours of Operation

2007 TA-3 & TA-15 Carpenter Shops

TA-3	Data Entry						
	Hours of Operation						
Month	TA-3						
January	3.1						
February	4.3						
March	25.6						
April	4.6						
May	3.4						
June	2.3						
6 mo. Total	43.3						

TA-15	Data Entry						
	Hours of Operation ¹						
Month	TA-15						
January	9.4						
February	17.4						
March	47.2						
April	13.6						
May	20.6						
June	8.9						
6 mo. Total	117.1						

TA:-3	Data Entry
	Hours of Operation ¹
Month	TA-3
July	2.9
August	9.9
September	2.3
October	4.9
November	1.5
December	1.4
6 mo. Total:	22.9

TA-15	Data Entry
	Hours of Operation ¹
Month	TA-15
July	12.3
August	10.3
September	8.8
October	10.2
November	13.0
December	4.8
6 mo. Total:	59.4

Saws, drills, shaping and sanding equipment shall each not operate in excess of 4368 hours per year.

Reference

Based on information provided monthly by the shop foreman from each shop.

> Attachment E Degreaser Solvent Usage

Historical Solvent Usage Data

TA

The usage information for Emission Unit TA-55-DG-1, ultrasonic cold batch degreaser, from Jul-01-2007 through Dec-31-2007 is displayed below.

Solvent

General Degreaser Information

Type

6.5

6

Degreaser

Nov-27-2007

Dec-18-2007

UT Bath	Cold Batch	55 Trich	loroethylene			
Date Measured	Initial Solvent Level (inches)	Volume Added (liters)	Level Added (inches)	Volume Removed (liters)	Level Removed (inches)	erren er
Jul-16-2007	7.4	0	0	14.55	7.4	
Jul-23-2007	0	14.74	7.5	0	0	
Aug-27-2007	7.5	0	0	1	0.5	
Sep-27-2007	6.5	0	0	0	0	
Oct-24-2007	6.5	0	0	0	0	

0

Attachment F
Internal Combustion Generator Hours of Operation

2007 Generator Hours

								First 6	Month Rea	adings	Second	l 6 Month R	eadings
TA	Bldg	Manufacturer	MODEL	KW	Fuel Type	Previous Reading Date	Previous Reading	6 Month Reading Date	Reading	Hours Run	12 Month Reading Date	Reading	Hours Run
3	38	Onan Sons	H1750DSG15	175	Diesel	Dec-06	3054.4	May-07	3057.0	2.6	Nov-07	3070	13
3	38	Onan Sons	350DFCC	350	Diesel	Dec-06	2619.4	May-07	2629.4	10.0	Nov-07	2636.5	\
3	38	Cummins	150DGFA	150	Diesel	Dec-06	1147.0	May-07	1158.9	11.9	Nov-07	1170.6	
3	40	Onan Sons	1500DVE15R31374B	150	Diesel	Dec-06	3.2	May-07	6.1	2.9	Dec-07	6.6	-
3	223	Onan Sons	45.OEM-15R/10742D	45	Nat. Gas	Dec-06	478.0	May-07	481.1	3.1	Dec-07	489.5	
3	440	Cummins	500FDR5051	150	Diesel	Dec-06	į	May-07	121.8		Dec-07	121.8	·
3	440	Cummins	DFGA-5005210	500	Diesel	Dec-06		May-07	74.8	Į	Dec-07	81.8	
3	1076	Cummins	DGBB-5601289	35	Diesel	Dec-06	<u> </u>	Jun-07	116.7	15.5	Dec-07	129.7	
3	1400	Cummins	DFEH-5699616	400	Diesel	Apr-07	14.0	May-07	14.1	0.1	Dec-07	33	
3	1404	Cummins	DFLC-5554001	1250	Diesel	Dec-05		Jun-07	324.2	1	Dec-07	336.5	
3		Caterpillar	SR-4	600	Diesel	Nov-05		May-07	315.0		Dec-07	326	
3	2322	Onan Sons	DGDA-5005757	80	Diesel	Nov-05		May-07	336.8		Nov-07	339.8	
16	980	Cummins	KTA50-G2	1100	Diesel	Dec-05		Jun-07	276.2		Dec-07	293.4	-
16	1374	Onan Sons	60ENA	60	Nat. Gas	Nov-05		May-07	1058.9		Dec-07	1092.9	
18	31	Onan Sons	275DFML29807N	275	Diesel	Dec-05	 	Jun-07	180.8	<u> </u>	Dec-07	180.8	
21	357	Caterpillar	SR-4	125	Diesel	Nov-05	 	May-07	541.0	<u> </u>	Jan-08	558.2	
60	yard	Cummins	DFHD-4964979	1000	Diesel	Feb-07	272.4	Jul-07	293.9		***************************************	648.4	
35	2	Onan Sons	100DGDB	1000	Diesel	Dec-05		Jun-07	115.3		Dec-07	115.5	
35	402	Cummins	DGCB-5674244	60		Jun-07	107.4		107.4		Dec-07	138.4	J
43	1	Cummins	4BT3.9-GC	50	Diesel	· · · · · · · · · · · · · · · · · · ·	i 	Jun-07 Mav-07		Ļ	Dec-07	383.9	
43	1	Onan Sons	DVE	150	Diesel Diesel	Nov-05 Nov-05	}		379.0 589.1	9.6 26.5	Dec-07	620.2	
46	335	Onan Sons	300DEFCB	300		Nov-05	ļ	May-07 May-07	900.4		Dec-07	959.5	
48	45	Onan Sons	DFCB-5740130	300	Diesel Diesel	Nov-05	{	<u> </u>	24.9		Dec-07	53.5	
50	37	Cummins	680FDR5059FF	500		Nov-05		May-07	489.1	8.9 4.0	Dec-07	502.9	
50			······································		Diesel			May-07			Nov-07	212.7	
\rightarrow	184	Onan Sons	DGFA-568741	150	Nat. Gas	Nov-05		May-07	209.7	ļ	Dec-07	149	<u> </u>
50	188	Onan Sons	L940563879	1250	Diesel	Nov-05		Jun-07	149.0		Dec-07	1234.1	1
53	1	Onan Sons	60ENA	60	Nat. Gas	Nov-05	 	May-07	1195.1	·	Dec-07	1234.1	
53	2	Kato Eng.	Kamag-14	50	Diesel	Nov-05		May-07	194.3		Dec-07	581.5	
53	M	Onan Sons	12.5JC-18R/16095AA	12.5	Nat. Gas	Nov-05	<u> </u>	May-07	581.5	•	Dec-07	317.9	
54	412	Olympian	95M-07874-F	500	Diesel	Nov-05	<u></u>	May-07	306.1		Dec-07	79.3	
55	5	Kohler	100RZ71	100	Nat. Gas	Dec-05		May-07	74.4	 	Nov-07	<u>i</u>	
55	8	Delco/Detroit	E7014DD	600	Diesel	Dec-05		Jun-07	814.3		Dec-07	822.2	
55	364	Onan Sons	1250DFLC-4987	1250	Diesel	Dec-05	1		62.0		Dec-07	82.8	
55	28	Onan Sons	40DL6T	40	Diesel	Dec-05		Jun-07	47.3		Dec-07	66.5	
55	47	Onan Sons	1465	200	Diesel	Nov-05			526.6		Nov-07	540	
55	142	Cummins	DFEB-4963414	400	Diesel	Dec-05	***************************************	 	96.1		Dec-07	105	
59	1	Allis Chalmers	2884-0703	90	Diesel	Nov-05			750.0		Dec-07	750	
63	Yard	Murphy	3166-0084	20	Diesel	Nov-05		ŧ	715.9	· 	Dec-07	716	1
64	1	Onan Sons	250DVG	250	Diesel	Nov-05			153.1	+	Dec-07	166.9	1
64	39	Onan Sons	20.0DL4-15R	20	Diesel	Dec-05	189.9	Jun-07	189.9		Dec-07	189.9	
69	33	Cummins	DFLC-5568730	1250	Diesel	Nov-05	53.2	May-07	62.5		Dec-07	71.3	8.8
	41	Generators in u	190	12548					TOTAL	479.6		TOTAL.	970.9

Second half average hours per unit 23.7 First half average hours per unit 11.7 N/R = Not Read

Attachment G Data Disintegrator Box Throughput

2007 TA-52 Data Disintegrator

	Data Entry			Data Entry	
Month	Boxes ^(c) Shredded	12-Month Rolling Total	Month	Boxes ^(c) Shredded	12-Month Rolling Total
January	484	9257	July	1188	10900
February	542	8759	August	634	10066
March	2206	10199	September	977	10444
April	799	10293	October	535	10651
May	1719	10989	November	751	11387
June	992	10602	December	593	11420
6 mo. Total	6,742		6 mo. Total:	4,678	

Annual Boxes (2007): 11,420

Attachment H
Power Plant Natural Gas and Fuel Oil Usage

TA-3 Power Plant Fuel Use Totals 2007 (Data Entry)

		DATA ENTRY												
	•	ower Plant ^b dgemoor Iron MMBTU/hr)	Boiler # 2 (Ed	wer Plant ^b Igemoor Iron MMBTU/hr)	TA-3-22 Po Boiler # 3 (Unio 210 MM		Monthly Totals							
Month	Natural Gas (MCF) ^a	Fuel Oil (gallons) ^a	Natural Gas (MCF) ^a	Fuel Oil (gallons) ^a	Natural Gas (MCF) ^a	Fuel Oil (gallons) ^a	Natural Gas (MMCF) ^a	Fuel Oil (gallons) ^a						
January	11,719	319	31,832	0	31,733	0	75.284	319						
February	36,598	0	21,940	347	611	0	59.149	347						
March	38,858 438 4		4,328	212	8,387	406	51.573	1056						
April	9,160 0		3,101	603	29,807	0	42.068	603						
May	362	27,893	10,074	438	24,198	50,133	34.634	78464						
June	0	0	0	0	0 0		0.000							
July	25	0	0	0	0	0	0.025	0						
August	15,215	0	146	0	0	0	15.361	0						
September	24,466	438	1,230	0	88	0	25.784	438						
October	19,297	384	17,033	0	1,124	438	37.454	822						
November	2,830	274	40,509	24	2,446	274	45.785	572						
December	1,475	384	60,327	0	2,709	329	64.511	713						
Annual Totals:	160,005	30,130	190,520	1,624	101,103	51,580	451.628	83334						
Jan June	96,697	28,650	71,275	1,600	94,736	50,539	262.708	80789						
July - Dec.	63,308	1,480	119,245	24	6,367	1,041	188.920	2545						

	12-Mo. Rolling Total	12-Mo. Rolling Total
Month	Natural Gas (MMscf)	Fuel Oil (gallons)
January	615.3	21463
February	616.0	21097
March	609.8	21231
April	601.9	21456
May	602.6	99269
June	573.2	98611
July	546.3	97448
August	534.6	97448
September	526.9	97886
October	482.3	98270
November	463.3	82840
December	451.6	83334

Daniel Marita	2000 MMscf	500.000 gallons
Permit Limits:	ZUUU MINISCI	Soo,ooo ganona

	Totals by	Fuel Tyne
	Natural Gas (MMscf)	Fuel Oil (Gallons)
Annual Totals:	451.63	83334.00
Jan June	262.71	80789.00
July - Dec.	188.92	2545.00

	2007 Daily Turbine Gas Use (MCF), 365 Day Rolling Total Gas Use, & Hours of Operation																							
	Ja	an	F/	eb	N	⁄lar	Α	\pr	Μ	1ay	J [,]	un	J	ul	Α	ug	S	ер	С	Oct	N	ov	D	ec ec
Day	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours	Gas Use	Hours
1			<u> </u>		<u> </u>				<u> </u>		<u> </u>						<u> </u>		0	0.0	0	0	0	0
2				<u> </u>	_	1								 					0_	0.0	0	0	0	10
3			_	1						 '	4	-	Control of the contro				<u> </u>		165	0.8	0	0	0	0
4				100000000000000000000000000000000000000			0.00	11.00	(10.00)						48.00	10000000	8181: CES 1818		15	0.3	0	0	0	0
5		1	_					<u> </u>		-	4	· · · · · · · · · · · · · · · · · · ·	_		4			<u> </u>	1441	6.5	0	0	0	0
6	<u> </u>	100.000.000	<u> </u>	5 ((3)((1)(1)(1)(1)	\$6,0,0,000	2 0.00 0.00				00.000.000	1		0.000.000			0.00.00.0		0.00.00	0	0.0	0	0	0	0
7 8		1	_	 			<u> </u>	1000000		1	1	<u>'</u>		<u> </u>		1			0	0.0	0	0	0	0
9		لسيا	4	<u> </u>			250.26 (E)	<u> </u>	 	 '	4	1		[42 (5) (2)			80000000	0	0.0	0	0	0	0
10			/	<u> </u>		1		2	 					+-					0	0.0	0	0	0	0
11		-			-			-	-		f	 	†					 	0	0.0	0	0	0	
12				1	31.00						#10#0#0#0#0#0#0#0#0#0#0#0#0#0#0#0#0#0#0	100000000000000000000000000000000000000					1000	\vdash	0	0.0	<u> </u>	0	0	10
13	(1)						800 (6)	1		100 J.H. (23)	1	10.517						77.77	0	0.0	0	0	0	10
14		7			0.000000						100000000							0.00	0	0.0	0	0	0	0
15																			0	0.0	0	0	0	0
16																		100	Ō	0.0	0	0	0	0
17								1		397.000.00									0	0.0	0	0	0	0
18		1			30.000.00		0.000				1000								0	0.0	0	0	0	0
19	980 000 000	1	1					1		100	1								0	0.0	Ō	0	0	0
20													0.08.00				9	0.25	0	0.0	0	0	0	0
21		90.000.000							000000000000000000000000000000000000000	100 Mg							0	0	0	0.0	0	0	0	0
22		200 300 1000	0.000.000.07	1507000000							4		6102.00				130	0.75	0	0.0	0	0	0	0
23	0.00	1		1		1'		1	<u></u>		1	1			<u> </u>		34_	0.25	0	0.0	0	0	0	0
24	100 S. 100 S			100000	40.00.00		66 55 59				4	100000	30,330,000	4			430	2	0	0.0	0	0	0	0
25	-	1				4'		1	1	100 000 000	1						966	4.5	0	0.0	0	0	0	0
26	<u> </u>			4	9.05.065	10 10 100		1		4	4			-			972	4.5	0	0.0	0	0	0	0 0
27			1000000			-			1		4	1		<u> </u>		1	920		-					
28			63152 (856.00)	<u> </u>	1	201.52.63	Wipson and	4	1		4—		!			4	329	2	0	0.0	0	0	0	0
29		1			_	 '		+		-			!	 			639 396	3 2	0	0.0	0	0	0	
30 31					/	 '				-			<u> </u>	1		+-	000		0	0.0			0	0
SUM		 		4	+	+							15.00/50.0000.00			\$ (0.000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4825		1621		0		0	
		Half Ga	L		0	MCF			Half Ga	معالعه	.—	446	MCF	<u> </u>	Δnr	nual Ga			146	MCF				<u></u>

Gray shaded areas are prior to the initial startup of the turbine generator unit.

The SCFH value in the cell equation is from the compliance test report (223620 SCFH or 223.6 MSCFH)

365 day rolling total: 6446 MCF

6446 MCF 6.446 MMSCF

Attachment I Power Plant Opacity Reports

Summary Table, Reports Attached

	Summary Laure, F	immary Table, Reports Attached				
Source	Date	Time	Average Opacity (a)			
TA-3-22 Power Plant	July 2007	N/A	(b)			
	August 2007	N/A	(b)			
	09-11-07	10:57 am	0%			
	09-11-07	11:08 am	0.125%			
	09-18-07	10:55 am	0%			
	09-18-07	11:08 am	0%			
	10-02-07	10:24 am	0.625%			
	10-02-07	10:35 am	0%			
	10-16-07	10:39 am	0%			
	10-23-07	10:25 am	0%			
	10-23-07	11:36am	0%			
	11-06-07	10:20 am	0%			
	11-13-07	11:14 am	0%			
	12-12-07	10:35 am	0%			
	12-19-07	10:55 am	0%			

- (a) Average opacity for the Power Plant is the sum of the highest consecutive 40 readings divided by 40 (10 minutes of readings). The method is in accordance with EPA Method 9 and 20.2.61 NMAC.
- (b) There were no visible emission readings taken in July or August due to a scheduled Power Plant steam outage. No fuel oil was used during these months.



Source Name:	-		7	Observation Da	te	-iopo://with.com/*****	Start ^	Γime	End Time
F	Power Plan	nt at TA-3		9-11-	クフ		110	57	1107
Source Location:				9-11- Sec			10		1/10/
	TA-3			Min	0	15_	30	45	Comments
Type of Source Boiler # 3		Type of Control Equipment No Particulate Control		1	0	0	0	0	MILITARY
Describe Emission		3	-	2	Ð	0	0	0	۵۰ سور سیده سیده
TOP DE	Boiler	#3 STACK Height Relative to Observer					ا سا		START LEND TIME USED
Height Above Grou	and Level	Height Relative to Observer		3	0	0	0	0	TIME WEED
Distance From Obs	Feet	Direction of Source From Observer		4	0	0	0	0	
	D Foet	NE		5	0	0	0	0	
Description of Plun		nly)	7	6	0	0	0	10	
□Lofting □Trap ☑No Plume Presen	it			7	0	0		0	
Emission Color	Plume Ty □Continu			8					
Water Droplets Pre-				9	0	0		0	
At what point in the			_		D	0		0	
•	•	POF STACK , trees, etc.)		10	0	0	0	0	
ł		, trees, etc.)		11					
BLUE S Background Color	5/ <u>C</u> <u>y</u>	Sky Conditions		12					
BUE Wind Speed		CLFAR ection		13	\$ 7 m				
3-4 mph	(provide fi	rom/to, i.e. from North to South)		14	70 E				
	FRO	M 55E Relative Humidity		15					3
Ambient Temperati	ire ·°F	Relative Humidity 65 %		16			germannen, agyag ga an i,		
Additional Commer	nts/Information:	:					1 1 1 1		
BURNER A	41641-8	FF EXERLISES		17					
WITH FO	IEL DI	2		18		3 1 - 3 8 <u>3 -</u>			
			┛┃	19			134508		
Stack with S	SOURCE L	AYOUT SKETCH		20					
Plume	3 50	Draw Arrow in North Direction		Average 10-M	inute (Opacity			of Opacity Readings
Sun 🕁		ission oint		0	0/0		ľ	Ain. O	% Max. 0%
Wind —	C	$\hat{\mathbf{X}}$		OBSERVER (please	print)			
			Name: Title: LON STONE ENSUREER						
			1	Signature	5000	-		V	Date
		To a second		(Jon	C11	1			9-11-07
				Observer Orga					W
		OBSERVER'S POSITION		KSL-E	-NY				Certification Date
		OBSERVER STOSHION		Certified by					j
-		40				nancesparentes of Paris No.	eriani-keneda mendakan		8.29-07
	SUNTOCA	TION LINE							

Source Name:		Observation Da	ite		Start	Time	End Time
Power Pla	int at TA-3	9-1/ Sec	-07		1/2	08	1118
Source Location:	-3-22		1	1			
Type of Source	Type of Control Equipment	Min	0	15	30	45	Comments
Boiler # 3	No Particulate Control	1	0	0	0	ļ	MILITARY
Describe Emission Point (Top of stack, etc.)		2	0	0	0	0	STARTEEND
TOP OF BOILER Height Above Ground Level	#3 BTALK	3	0	0	0	0	STARTFEND TIME USED
Height Above Ground Level	Height Relative to Observer	4	1	0	5	0	MAE MOED
Distance From Observer	Direction of Source From Observer		0	1			
200 Feet	NE	5	0	0	0	0	
Description of Plume (stack exite	only) ing Panning Coning Coning	6	0	0	0	0	
□No Plume Present		7	2	9	0	0	
Emission Color BLACK TO Contir		8	0	0	0	0	
Water Droplets Present? ☑NO □YES If YES, droplet pl	ume is DAttached Detached	9	0	0	0	0	
At what point in the plume was o	pacity determined?	10	0	0	0	0	
Describe Background (i.e. blue sk	OP OF STACK y, trees, etc.)	- 11					
1		1 12					
BUE S/K / Background Color BUE Wind Speed Wind Di	Sky Conditions	13					
Wind Speed Wind Di 3-4 mph (provide	rection from/to, i.e. from North to South)		ļ				
1 1		14					
Ambient Temperature	Relative Humidity 65%	15	.				
Additional Comments/Information		16					
BURNER LITE-DI		17					
WITH FUEL O		18					
will have c	/	19					
CONTROL	I ANGERRA CANDONINA				Skirk Krista		
Stack SOURCE	LAYOUT SKETCH	20					
Plume	Draw Arrow in North Direction	Average 10-M				Range (Min.	of Opacity Readings Max.
fi (D) (Point	0.1.					10 5%
Wind>		OBSERVER (please	print)		Title:	
	T	VON S	TEX	E		ENG	WEER
		Signature	•	-		_	Date
THE PROPERTY OF THE PROPERTY O		1 Don	5	tor	<u></u>		9-11-07
	- Company of the Comp	Observer Org		on			1
	OBSERVER'S POSITION	Certified by		<u>r</u>		·	Certification Date
	140°	FETA					8.29.07
SUN LOC	ATION LINE	La ////				·····	

Source Name:	Observation D	THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	Start Time	End Time
Power Plant at TA-3	9-18	-197	1055	1105
Source Location:	Sec			, // 20
TA-3-22	Min	0 15	30 45	Comments Militury
Type of Source Type of Control Equipment Boiler # / No Particulate Control	1	00	00	start &
Describe Emission Point (Top of stack, etc.)	2	00	00	erd fine
Height Above Ground Level Height Relative to Observer	3	00	00	
150 Feet 140 Feet	4	00	00	
Distance From Observer ZOD Feet Direction of Source From Observer	5	00	50	
Description of Plume (stack exit only) □Lofting □Trapping □Looping □Faming □Coning	6	00	10 0	
XINo Plume Present	7	00	00	
Emission Color Plume Type ANO Plume Present Continuous Of Fugitive Clintermittent	8	00	00	
Water Droplets Present? ■NO □YES If YES, droplet plume is □Attached □Detached	9	00	00	
At what point in the plume was opacity determined?	10	ひり		
Describe Background (i.e. blue sky, trees, etc.)	11			
Blue sky	12			
Background Molor Sky Conditions	13			
Wind Speed Wind Direction (provide from/to, i.e. from North to South)	14			**************************************
Trom ESE	15		 	
Ambient Temperature Relative Humidity 45%	16			, ,
Additional Comments/Information:	17			
Fuel Dil burn exercise Boiler tripped at 1/06, re-lite	18			
at 1107	19			
Stack SOURCE LAYOUT SKETCH	20			
with Draw Arrow in	1 1	Minute Opacit	y Range	of Opacity Readings
Sun Coint Emission North Direction	1	0/2	1 2 -1	Max.
Wind - Which		(please print)		10 010
y nach	Name:	54	Title:	
	Signature	LONG		ngineer Date
	1 2 2000	costa	h. ,	9-18-07
	Observer Org	ganization	<u> </u>	y = / \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
OBSERVER'S POSITION	KS2 Certified by			Certification Date
	Certified by			Confidence Date
140°	C/A			8-4-01
SUN LOCATION LINE				

Source Name:		Observation Da			Start	Time	End Time
Power Plan	nt at TA-3	1 9-18	-	, 5	رر	O 8	1118
Source Location:	2.00	9-18 Sec					1//-8
TA-	3-22 Type of Control Equipment	Min	0	15	30	45	Comments
Type of Source Boiler # /	No Particulate Control		0	0	0	0	stag &
Describe Emission Point (Top of s		2	0	0	0	0	ent time
Top of Boiler		3		$\overline{}$	2	~	
Height Above Ground Level	Height Relative to Observer	4	0	0	<u> </u>	0	
Distance From Observer	Direction of Source From Observer	1	9	D	10	0	
ZOD Feet	NE	5	0	0	0	40	
Description of Plume (stack exit or DLofting Trapping Loopin		6	D	0	0	0	
Emission Color Plume Ty	pe IINo Plume Present	7	d	စ	0	0	
enusion Continu	ous DFugitive DIntermittent	8	0	0	0	つ	
Water Droplets Present? ♣NO □YES If YES, droplet plus	ne is Attached Detached	9	٥	0	0	0	
At what point in the plume was ope	acity determined?	10	O	0	0	0	
Describe Background (i.e. blue sky	trees, etc.)	11					
Dhu sku		12			SiverVie Signosti		
Background Color O	Sky Conditions	13				Ant a	
Wind Speed Wind Dire							
4-6 mph (provide fi	omFSF	14				-	
Ambient Temperature	Relative Humidity	15			45		
Additional Comments/Information:	-	16					
		17					
Poiler trunced	at 1106, se-lite	18		# 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
at 1107. Very	stable bun						
		19			146		
Stack SOURCE L	AYOUT SKETCH	20					
Plume	Draw Arrow in North Direction	Average 10-M	inute C	Opacity		Range o Min.	of Opacity Readings Max.
	pint -	0	0/	2		0	% 0%0
Wind —	State 1	OBSERVER (please	print)		Title:	
		Deu	5	touc	2	E	ngurer
		Signatule		* .			ngruper Date
	To deliminate the control of the con	Her	51	on	<u></u>		9-18-07
	The state of the s	Observer Orga	pizatio	On			
	OBSERVER'S POSITION	Certified by				1	Certification Date
1	40°	L-rd				To the same of the	
		0/1					8-29-07
SUN LOCA	TION LINE						

Source Name:	Observation Di	ate		Start	Time	End Time	
Power Pla	nt at TA-3	10-2-	<i>か-2-07</i>			24	1034
Source Location:	2.00	Sec			<u> </u>	,	3 10 2 1
	3-22	Min	0	15	30	45	Comments
Type of Source Boiler # 3	Type of Control Equipment No Particulate Control	1	2	0	0	0	-
Describe Emission Point (Top of		2	0	0	0		,
TOPOFROUF	0#3 STALK	3			-	-	·
TOP OF BOILE	Height Relative to Observer	3	, 12	D	0	2	
Distance From Observer	Direction of Source From Observer		0	0	1	0	
250 Feet	NE	5	: . 70	0	7		
Description of Plume (stack exit o		6					
■ BLofting □Trapping □Loopi □No Plume Present		7	0	0	\mathcal{O}	0	······································
Emission Color Plume Ty			12	2	10	5	
Black Contin	uous OFugitive Mintermittent	8	5	\sim	0	0	
Water Droplets Present? ☑NO □YES If YES, droplet plu	me is 🗆 Attached 🗆 Detached	9	0	0	0	0	
At what point in the plume was op		10	0	0	2	0	
Describe Background (i.e. blue sky	trees etc.	11				(
1 12/11- 1111	1						
Background Color	Sky Conditions	12					
Wind Speed Wind Dir	Sky Conditions TOUTLY CLDUDY section	13	·				
13 mph (provide)	rom/to, i.e. from North to South)	14				-	
Ambient Temperature	Relative Humidity	15					
Anthem reinperature	H6%	16		#* stance			
Additional Comments/Information							
FUEL DIL BURN	EXERCISES	17			_		· · · · ·
		18				***************************************	
		19					
	AYOUT SKETCH	20				-	
with U Plume	Draw Arrow in	Average 10-M	inute C	pacity	R	ange of	Opacity Readings
	ission North Direction	106	25	0/	N	$^{4\mathrm{in}}$ $>$ \cdot	Max. 9/
		OBSERVER (-	100	····	3/	
Wind — (,		Name:		,		Title:	
		Stonabusa	570	NE		Ex	OULEER Date
		Signature		- 1			Late .
		Observer Orga		5/0	ne		12-2-02
		1 .	iiii Zaiii O	11			A STATE OF THE STA
F	OBSERVER'S POSITION	Certified by					Certification Date
	40°	J				!	
	24004.00	C/H	,,,,,, ,,				8-29-07
SUN LOCA	I ION LINE						

 Los Alamo 	S

Source Name:	Observation D	ate	Start Time	End Time
Power Plant at TA-3	10-2	-07	10,35	1045
Source Location: TA-3-22	Sec Min	0 15		Comments
Type of Source Type of Control Equipment Boiler # 3 No Particulate Control	1	00	00	
Describe Emission Point (Top of stack, etc.)	1 2	00	00	
TOP OF BOILER#3 5TACK Height Above Ground Level Height Relative to Observer	3	00		
Height Above Ground Level Height Relative to Observer Stance From Observer Direction of Source From Observer	1	00		and an analysis of the second
	5	100	00	
Description of Plume (stack exit only) □Lofting □Trapping □Looping □Fanning □Coning	6	00	00	
⊠No Plume Present	7	00	00	
Emission Color Plume Type IINo Plume Present IIContinuous IIIFugitive IIIntermittent	8	00	00	
Water Droplets Present? ☑NO □YES If YES, droplet plume is □Attached □Detached	9	00	00	
At what point in the plume was opacity determined?	10	100	00	
Describe Background (i.e. blue sky, trees, etc.)	-			
	12			
Background Color Sky Conditions Sky Conditions Wind Speed Wind Direction	13			
Wind Speed Wind Direction (provide from to, i.e. from North to South)				
FROM NNW	15			
Ambient Temperature Relative Humidity 59 °F 46 %	16		The state of the s	
Additional Comments/Information:	17			
FUEL ON BURN EXERCISES		 		
	18			
	19			e construir anni en la proposición de la construir de la const
Stack SOURCE LAYOUT SKETCH	20			
Plume Draw Arrow in North Direction	Average 10-N	finute Opacity	Min	Opacity Readings Max.
Sun Point	<u> </u>	0%	0	% 0%
Wind -	OBSERVER ((please print)	Title:	
V	200	ST6, N	E ENG	SNEER
	Signature)	Date
	Observer Org	anization	057h	<u>10-2-07</u>
4	1/452	market market and the second		La constitue de la constitue d
OBSERVER'S POSITION	Certified by			Certification Date
140°	ETA			8-29-07
SUN LOCATION LINE				



Source Name:	Observation Date Start Time End Time					End Time	
Power Pla	nt at TA-3	10-1	6-8	フ	10	39	1849
Source Location: TA-	3_22	Sec Min					
Type of Source	Type of Control Equipment		0	15	30	45	Comments
Boiler # 3	No Particulate Control	1	0	0	0	0	·
Describe Emission Point (Top of s	tack, etc.)	2	0	O	0	0	
Top of BollER? Height Above Ground Level	#3 STACK	3			0		
Height Above Ground Level /50 Feet	Height Relative to Observer		0	0		0	
Distance From Observer	Direction of Source From Observer	4	0	0	0	0	
250 Feet	NE	5	0	0	0	0	
Description of Plume (stack exit of	nly)	6					
□Lotting □Trapping □Loopi No Plume Present	ng □Fanning □Coning	7	0	()			
Emission Color Plume Ty		/	0	رنح	0	0	
EMISSION	ious OFugitive OIntermittent	8	0	0	0	0	
Water Droplets Present? PINO DYES If YES, droplet plu	me is □Attached □Detached	9	0	0	0	0	
At what point in the plume was op		10	0	0	0	0	
1FT. A13DVE TOP Describe Background (i.e. blue sky	DF STACK	11				· F ————	
		12					
Background Color	Sky Conditions						
Wind Speed Wind Dire	ection	13	_				
5-10 mph (provide f	rom/to. i.e. from North to South)	14					
tro	N 5E Relative Humidity	15					
Ambient Temperature	Relative Humidity 36 %	· · · · · · · · · · · · · · · · · · ·					
Additional Comments/Information:		16					
Fuel OIL BURN	Exercise	17					
	,	18					
		19					
	AYOUT SKETCH	20			***************************************		
With Plume	Draw Arrow in	Average 10-M	inute C	pacity			f Opacity Readings
i . 7 3	ission North Direction oint		ره (,))	Min.	% D%
· ·		OBSERVER (please	orint)			10 2/0
Wind — \		Name:		•		Title:	
		Signature	376	DASL	=	EN	Date FR
) Signature	مسد	1.			Date
		Hou	$\leq_{\mathcal{I}}$	100			12-16-07
		Observer Orga	pizatio	n			
<u>.</u>	OBSERVER'S POSITION	Certified by		······	·		Certification Date
	40°	ETA					8-29-07
CHALL OF A	TION LINE	1217	~~				0.2, 2,
SCHA FOEW	COURT DENE						



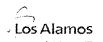
Source Name:	Observation I	Date	Start Time	End Time
Power Plant at TA-3	10-2	マーのフ	1025	1035
Source Location: TA-3-22	Sec Min	0 15	30 45	Comments
Type of Source Type of Control Equipment	1		1 10 110	Commence
Boiler # / No Particulate Control	 	00	00	
Describe Emission Point (Top of stack, etc.)	2	00	100	
TOP OF 13011 ER#1 STACK Height Above Ground Level Height Relative to Observer	3	00	0	
Height Above Ground Level 150 Feet 130 Feet	4	100	00	
Distance From Observer Direction of Source From Observer	1	100	00	
ZODFeet NE	5	00	00	
Description of Plume (stack exit only) □Lofting □Trapping □Looping □Fanning □Coning	6	00	00	
⊠No Plume Present	7	00	00	
Emission Color Plume Type BNo Plume Present Continuous CFugitive CIntermittent	8	100	00	
Water Droplets Present?	† }	100	00	
₩NO DYES If YES, droplet plume is DAttached Detached	9	00	00	
At what point in the plume was opacity determined?	10	00	00	The state of the s
Describe Background (i.e. blue sky, trees, etc.)	1 1			
Blue SKY	12			
Rackground Color Sky Conditions				
Wind Speed Wind Direction (provide from/to, i.e. from North to South)	13		ļ. J	
	14		ļ <u>.</u>	
Ambient Temperature Relative Humidity	15			
50° 26°	16			
Additional Comments/Information:	17			
FUEL OIL BURN EXERCISE				10 Amin 10
	18			
	[6]		T Profitation a signal and a si	
Stack SOURCE LAYOUT SKETCH	20			
Plume Draw Arrow in	Average 10-A	Minute Opacity		of Opacity Readings
Sun Point Emission		10/0	Min.	% Max. 0%
$W_{\text{ind}} \rightarrow W_{\text{ind}}$		(please print)	i c	1000
	Name:	41	Title:	
Y	8ignature	Jone	-cn	Date
		14	9.0	10 - 7 07
	Observer Org	ganization		10-23-07
	K51			
OBSERVER'S POSITION	Certified by		:	Certification Date
140°	ETA			8-29.07
SUNLOCATION UNF	1-5-1-1			4 5 4

	/		
	:		
	100	Alamos	
•	و و ا	Paginos	

Source Name:		Observation D	ate		Start	Time	End Time
Power Plan	nt at TA-3	10-2	3-5	7	11	35	1148
Source Location:		Sec			·		·
TA-		Min	0	15	30	45	Comments
Type of Source Boiler # /	Type of Control Equipment No Particulate Control	1	0	0	0	(0)	under market
Describe Emission Point (Top of s		2	0		-		
	_			1		<u> </u>	-
Height Above Ground Level	Height Relative to Observer	3	$\downarrow O$	0	0	0	
150 Feet	130 Feet] 4	0	0	1	0	a decision of the second
Distance From Observer	Direction of Source From Observer	5		10			
200 Feet	NE]	10	\mathcal{Q}_{-}	10	0	
Description of Plume (stack exit of DLofting Trapping DLooping	nly)	6	0	0	0	0	
₩No Plume Present	·	7					
Emission Color Plume Ty	pe PNo Plume Present 10us DFugitive DIntermittent		10	\mathcal{C}			
Water Droplets Present?	aous du agrire dimension	8	10	0	0	0	
Mater Droplets Present? MATERIAL PROPERTY PLUS MATER	me is □Attached □Detached	9	D	0	0		
At what point in the plume was opa		10	0	0	0		
Describe Background (i.e. blue sky	of Stack					U.	OFFICIAL PARTIES
Blue 5ky	. Hees, etc.,	12					
Background Color	Sky Conditions	2	-				
Wind Speed Wind Dire	Clear ection						
6-8 mph (provide fi	rom to, i.e. from North to South)	1.4					
Fro	M Relative Humidity	15			<u> </u>		
Ambient Temperature	Relative Humidity 25 %	13					
Additional Comments/Information:		16					
1		17					
Fuel OIL BURN	exercise	18		~ ~~ ~			
Re-light at 11	36		ļ				
		19				·	
Stack SOURCE L	AYOUT SKETCH	20					
Plume	Draw Arrow in North Direction	Average 10-N	inute (Opacity		-	of Opacity Readings
	ission oint	0	0/		1	vlin.	0/ Max.
		OBSERVER	(please	print)			10 010
Wind		Name		L		:Title	
	Y	Signature	1 7	ONE	<u> </u>	Eng	Date
			_	1		ĺ	
		don	5	Dr	<u> </u>		16-23-07
		Observer Org	;a n rzati	on			Professional Control C
	OUCLEARED A SOCIALON	1556		·····			Carle and Date
	OBSERVER'S POSITION'	Certified by				;	Certification Date
	400	ETA					8-29-07
SUN LOCA	ATION LINE						

	\wedge
J	Los Alamos
	for the contract of the graph and a second of the contract of

ource Name: Observation Date		Date	Star		Time	End Time
Power Plant at TA-3	11-6-07			1020		1030
Source Location:	Se	c	Ţ	 		
TA-3-22	Min	0	1.5	30	45	Comments
Type of Source Type of Control Equipment	to the state of th	0	0	10	10	
Boiler = _3 No Particulate Control				- 4-6		
Describe Emission Point (Top of stack, etc.)	7 2	\mathcal{D}	0	Ø_		
Height Above Ground Level Height Relative to Observer	3	. (0	n		
150 Feet 140 Feet				<u> </u>	1/	
Distance From Observer Direction of Source From Observer		0	D	10.	0	
250 Feet NE	5		10	10	٥	
Description of Plume (stack exit only)						
□ Lofting □ Trapping □ Looping □ Fanning □ Coning	6		0	$\perp \mathcal{Q}$	0	
MNo Plume Present Emission Color Plume Type MNo Plume Present	7	0		10	27	
	8		1-E-C	-		
We		\mathcal{L}	0	0	\mathcal{O}	
MNO DYES If YES, droplet plume is DAttached DDetached	9	0	0	0	0	
At what point in the plume was opacity determined?	10	13			1	
	10	0	0	0	0	
Describe Background (i.e. blue'sky, trees, etc.)						
Background Color Sky Conditions	12	· - - · · ·				
Background Color Sky Conditions						
Wind Speed Wind Direction	-[13					
5-8 mph (provide from a i.e. from North to South)	14	1				
		:				
Ambient Temperature Relative Humidity	15					,
38 * 55 %	16					
Additional Comments/Information:		.]			}	· · · · · · · · · · · · · · · · · · ·
Fuel OIL BURN exercise	17					
	18					
	19					
Stack SOURCE LAYOUT SKETCH	20					
With U Draw Arrow in	Average 10-	Minute (Dnacity	<u>-</u>	Range of	Opacity Readings
Emission North Direction		101		- 3	din.	Max O
Stun Point		10			0	0 0/0
N and →	OBSERVER	(please	print)		Title:	\$
	110N S	+		1		neer
V	Signature		*************		192	Date
	18,1		1			
	Observer Or	ranii zati		٤		11-6-07
4 	1 1/1	Samzan	J(1			
OBSERVED S HOSTION	1124					Cartification Date
OBSERVER'S POSITION	Certified by				i	Certification Date
1409	ETA					8-29-07
SEN LOCATION LINE		4 might from uping at 7 200.7 823.7500	ASSESSMENT OF THE PERSON NAMED OF THE PERSON N			The same of the sa



Source Name:		7	Observation Date Star			Start	Time	End Time		
Power	_	1/-13-07 Sec			1114 112		1124			
Source Location:	TA-3-22		Sec Min	0	15	1	45	Comments		
Type of Source	Type of Control Equipment No Particulate Control	7	1	0	0	\sim				
Boiler # 2	_					\mathcal{L}				
Describe Emission Point (To			2	0	0	0	0			
To E OF BOY	I Height Relative to Observer	-	3	D	0	\mathcal{L}				
/50 Feet	140 reel		4	0		0	<i>2</i>			
Distance From Observer	Direction of Source From Observer	7	5	-	11/	-(/				
ZDO Feet	NE_	╛┞	3	0			0			
Description of Plume (stack Lofting Trapping D			6	0	0	0	0			
⊠No Plume Present Emission Color Plu	me Type No Plume Present	-	7	0		0	0			
100 DC	Continuous Offugitive OIntermittent		8	0	0	0	t)	**************************************		
Water Droplets Present?	et plume is Attached Detached		9	0	8	0	0	The state of the s		
At what point in the plume w	rus opacity determined?	1[10	0	0	0	0			
Describe Background (i.e. bl	┨╟	11								
		12								
Background Color 132 15 Wind Speed Win										
Wind Speed Win	d Direction vide from/to, i.e. from North to South)		13							
I de la company	1	14								
Ambient Temperature	Relative Humidity 46 %	1	15							
Additional Comments/Inform	nation:	-	16							
FUEL DIL BUI	nn exercise		17	***************************************						
			18							
		╛┖	19							
Stack SOURC	CE LAYOUT SKETCH		20				7			
Plume	Draw Arrow in North Direction		Average 10-Mi	nute C	pacity	1		of Opacity Readings		
Sun 🕂	Point Process	Min. O. el Max. Se						en Max ne		
11/2 1		OBSERVER (please print)						10 0 10		
Wind —		Name: Title:								
		-	<i>∐⊙v</i> Signature	100	26		£11	311285.		
	***************************************		pignature	مر	ļ			Date		
	1 1 Du - 12-13-57									
		Óbserver Orga	gizatić	n						
	OBSERVER'S POSITION		KSL-					Certification Date		
~		'	conficulty .					ŀ		
	[-]()*	L	<u>とアA</u>			·····		8-29-07		
744 49 4 1	COMMITTEE	ł								



Source Name:		Observation Date			Start	Time	End Time		
Power Plant at TA-3			12-12-07 Sec -07			4035 1645			
Source Location:	`A-3	-22	Sec Min	0	15	30	45	Comments	
Type of Source	······································	Type of Control Equipment	1	- Commercial Commercia					
Boiler # /	No Particulate Control		<u>lo</u>	12					
Describe Emission Point (To	2 Service (Art to be and the book and and a business to be a finished for the definition of the services of th		22			prove trees to the constant or man a common experimental province or many trees.			
TOP OF BO Height Above Ground Level	15	Haight Palativa to Observe	3		13	10		WAA-remild (NO	
15D Feet		14D Feet	4				-		
Distance From Observer	From Observer Direction of Source From Observer				E.		The state of the s		
200 Feet		NE	5	10	10				
Description of Plume (stack of Lofting Trapping DL	xit only ooping	y) □Fanning □Coning	6	0	12.	12			
Emission Color Plum	е Турс	©No Plume Present	7	10			0		
FMISSION DC		us OFugitive OIntermittent	8	2	8		0		
Water Droplets Present?	t plum	e is □Attached □Detached	9		0	<i>Ø</i>	0		
At what point in the plume w			10	0	Ô	0	0		
Describe Background (i.e. blu	1 11								
	1 12			100000	0.000				
BLUE SKY Background Color SLUE	3	Sky Conditions BRTLY CLOUDY							
Wind Speed Wind	Direct	tion	13						
7 mph (prov	14								
+1	15								
Ambient Temperature	"	NESE Relative Humidity 68 %	16						
Additional Comments/Information									
FUEL OIL BUR.	NE	XERLISES	17						
			18						
			19			and the same of th			
with Q	E LA	AYOUT SKETCH	20						
Plume	Emis								
Sun 🔱	Poi	ot (N	OBSERVER	(nlasea	neint\				
Wind —	X		OBSERVER (please print) Name: Title: Figure Enougeer						
			Signature	1 7	Ind Marie 1	<u> </u>		Date Date	
			1 Jakon	ne buri		<u> </u>		17:-17:07	
			Observer Org	anizatio	on one	A. Mariane V.	Trice out out of the same of	orden set tit til sen sammelin settet til til sen se til sen set sen	
		OBSERVER'S POSITION	Certified by		~~~~~~~~~~~			Certification Date	
	140								
	140					enter expenses		8-29-27	
SUN I	OCAT	ION LINE							



Power Plant at TA-3 Source Location: TA-3-22 Type of Source Boiler # 3 Power Plant at TA-3 2 9 0 15 30 45 Co	mments
Source Location: TA-3-22 Type of Source Type of Control Equipment Sec Min 0 15 30 45 Co	
Type of Source Type of Control Equipment	imichis i
1 DUNCE 17 1 INVIANICUMATE CONTINUE I I I I I I I I I I I I I I I I I I I	
Describe Emission Point (Top of stack, etc.)	
TOP OF BOILER #3 STACK Height Above Ground Level Height Relative to Observer 3 000	
Height Above Ground Level Height Relative to Observer	. , , {
150 Feet 140 Feet 4 0 0 0 0	
Distance From Observer SO Yards Direction of Source From Observer 5 0 0 0 0	
Description of Plume (stack exit only) □Lofting □Trapping □Looping □Fanning □Coning 6	
killo Plume Present	
Emission Color Figure 1378 40 For figure 170 color 1	
WEMISSION Continuous Fugitive Intermittent 8 0 0 0 0 0 0 0 0 0	
NO □YES If YES, droplet plume is □Attached □Detached 9 000	
At what point in the plume was opacity determined?	
Describe Background (i.e. blue sky, trees, etc.)	
Blue Sky Conditions Blue Party Cloudy Wind Speed Wind Direction	
Background Color Sky Conditions	
Wind Speed Wind Direction 13	
FROM SE 15	
Ambient Temperature Retailve Humidity 37%	of which who followers are a second
Additional Comments/Information:	
FUEL UIL BURN EXERCISE	
18	
19	
Stack SOURCE LAYOUT SKETCH 20	
with O Draw Arrow in Average 10-Minute Onacity Range of Onacity	y Readines
Emission North Direction Min.	dax.
Sun (Point (P)	9/2
Wind — OBSERVER (please print) Name: Title:	
Dan Stone Engineer	p
Signature Date	
1 Jon 5/021 12-	0.07
Observer Organization	754
OBSERVER'S POSITION Certified by Certific	ation Date
140° 8-2	9-07
SUN LOCATION LINE	